

## Public Comments on BAP Salmon Farm Standard 3.0 and GSA Responses

Audit Clause	Public Comment	Proposed Change	GSA Response
Section C. Food Safety	Product contamination and antibiotic overuse can also be avoided by maintaining optimal levels of animal welfare throughout the production process.	<p>To avoid possible contamination of fish, farms shall control:</p> <ul style="list-style-type: none"> <li>- inputs of smolts and juvenile fish</li> <li>- the risk of contaminated feed</li> <li>- the use of any medicinal feeds</li> <li>- parasites that are potentially transmissible to humans</li> <li>- sanitation procedures during the transport of harvested fish</li> </ul> <p><u>animal welfare-related husbandry aspects such as water quality, stocking density, enriched environment, feeding, and stunning/slaughter that help prevent contamination events and mitigate the negative impacts on fish if such events were to occur</u></p>	GSA agrees in the complementary ways that proper animal welfare controls can support food safety culture. However, GSA standards are organized by subject area and animal welfare was considered within its own section.
1.1		This clause should not only prohibit the use of antibiotics or chemicals that are proactively prohibited but should also outline the process for monitoring and verifying compliance. It should include regular inspections and testing.	GSA agrees with this provision overall and will plan to include within the clause guidance details on how to monitor and verify compliance to this clause.
1.5	This clause must go into more detail to be effective	The standards should encourage a holistic and pre-emptive approach to disease prevention and management that prioritises non-antibiotic alternatives. Antibiotics should only be used to treat sick fish and should not be used to prevent disease. Antibiotics are not a substitute for good management that prevents disease and supports aquatic animal health and welfare. Therefore, antibiotics should not be routinely used on farms. Poor management and environmental conditions can increase disease rates and lower immunity in fish; thus, antibiotics should not be used as a substitute for proper management choices.	The approach proposed is directly in line with BAP's historic and continued philosophy towards antibiotic treatment. BAP standards have always prohibited the prophylactic treatment of antibiotics while allowing metaphylactic treatments of populations to manage identified diseases. This also prohibits the use of any drugs deemed critical to human health by the WHO.

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1.5	Any decisions regarding antibiotics and potential treatment procedures must be made by a certified aquatic animal veterinarian and detailed in on-farm documentation for the duration of the production cycle.	Antibiotics shall only be used to treat diagnosed bacterial disease <u>in accordance with a designated treatment plan prescribed by a certified aquatic animal veterinarian</u> and shall not be used as growth promoters.	GSA agrees with the intent of this proposal and will plan to add the statement to clause 1.5. However, the work 'designated' will be replaced with 'defined'.
1.1 and 1.5	Farms shall not use antibiotics or chemicals that are proactively prohibited in the country in which production is occurring, or in the country to which fish will be exported, nor any treatment that could result in harmful residue in fish. Antibiotics shall only be used to treat diagnosed bacterial disease and shall not be used as growth promoters	<p>The standards should specifically state that critically important antimicrobials cannot be used under any circumstances.</p> <p>It is positive that the standards require that antibiotics are not used as growth promoters. However, it should also be explicitly required that antibiotics are not used prophylactically. The standards should emphasise the importance of good management and preventive treatments on farm that should reduce the incidence of disease. Antibiotics should not be used as a replacement for poor welfare and management that leads to a disease.</p>	GSA agrees with these concerns and have already addressed all of these within clause 4.43.

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Section D. Social Accountability - Community - Employee Training	<p>Staff shall be given training on the work they are required to do, as well as on safety procedures, with allowance made as needed for workers whose first language is not the local language. This must include adequate and periodic training on aquatic animal health and welfare. This includes but is not limited to, knowledge related to pain recognition and management, humane handling, and other welfare aspects such as species-specific needs and behaviors.</p> <p>Designated employees shall be responsible for various practices during production. Staff must also be trained on actionable emergency responses and contingency plans as it relates to unexpected disasters that could negatively impact worker and animal health and safety.</p>	<p>2.75 : The farm shall have a training program to verify that workers who handle or are exposed to antimicrobial agents, agricultural chemicals, fuels, or other toxic substances that represent a physical, human health, <u>animal health</u>, or environmental hazard are properly trained in their safe use.</p> <p>2.76 : The farm shall provide training in personal health and hygiene to promote worker health and safety. The farm shall also provide refresher training to all employees on these subjects at least annually.</p> <p><u>: The farm shall provide training on species-specific production practices that prioritize animal welfare and worker safety. At minimum, updated training must be completed at least annually. Employees shall also be trained in specific protocols for which additional knowledge is required such as stunning operations prior to slaughter, or structural maintenance when enrichments are introduced.</u></p>	<p>GSA agrees that appropriate training in animal welfare measures is necessary to advance best practices on the farm. However GSA standards are organized by subject area and animal welfare was considered within its own section. With that, we agree to implement these relevant points into the guidance of the animal welfare section related to the training clauses.</p> <p>Additionally, we agree to implement the proposed update to clause 2.75 as it relates to worker safety. Lastly, as this is a species-specific standard for BAP, we believe the intent of the existing training requirements for animal welfare are already considered a species-specific light.</p>
2.42	<p>In Chile, the spirit of the point is complied with, however it is not detailed in a policy if in the contracts and procedures, they may open the means of verification of the point, to which it may be described in procedures, instructions, regulations.</p>	<p>It should not be subject to a policy but rather a document that could be a procedure, instructions, protocol, among others.</p>	<p>GSA agrees to update the clause text to state: 'policy or procedure' and will also clarify the range of acceptable evidence through guidance.</p>
2.45	<p>In Chile, the spirit of the point is complied with, however it is not detailed in a policy if in the contracts and procedures, they may open the means of verification of the point, to which it may be described in procedures, instructions, regulations.</p>	<p>It should not be subject to a policy but rather a document that could be a procedure, instructions, protocol, among others.</p>	<p>GSA agrees to update the clause text to state: 'policy or procedure' and will also clarify the range of acceptable evidence through guidance.</p>

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2.61	<p>Este punto se requiere mayor claridad, ya que en Chile para los centros de trabajo donde existan mas de 25 personas se exige comité paritario de higiene y seguridad, en el caso de nuestros centros ningun centro contiene mas de 25 personas, por lo tanto no aplicaria el punto.</p> <p><i>This point requires greater clarity, since in Chile for work centers where there are more than 25 people, a joint hygiene and safety committee is required. In the case of our centers, no center contains more than 25 people, therefore it would not apply.</i></p>	<p>They should explain that it is a safety committee, it could be open to meetings with the safety manager to improve working conditions.</p>	<p>This standard requirement applies to all facilities regardless of company/farm size. Even if a Salmon farm is small in size and is not required to assemble a joint hygiene and safety committee based on Chilean Law, they are still required to assemble an employee safety committee according to the standard.</p>
2.62	<p>BAP suspends farms for fish escapes but there is no consequence for death of workers or visitors. Suggest adding wording to clause 2.62 to introduce such a requirement.</p>	<p>Any workplace accident which results in the death of a facility employee or visitor shall be reported immediately to the Certification Body and to BAP, and if there is evidence that the death was due to negligence on the part of the facility, shall result in immediate suspension from the BAP program.</p>	<p>GSA agrees to include "work-related death" as a component of clause 2.51 add a new sub-clause to 2.51 with the following language:</p> <p>2.51.1: If a death is reported, an independent investigation shall be initiated to determine the root cause of the incident and whether there was negligence on the part of the facility.</p> <p>Additionally, as nonconformity to this issue would be considered a Critical NC based on BAP definitions, this would automatically trigger a investigation process based on the BAP CB Requirements Document.</p>

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2.68	<p>En los centros de Chile el personal cuenta con capacitaciones ne primeros auxilios y se realizan encuesta de salur, antes del inicio del turno por lo que si la persona se siente mal no ingresa, no estamos deacuerdo por inviabilidad de la implementación de una CPR</p> <p><i><u>In the centers in Chile, the staff has first aid training and a health survey is carried out before the start of the shift, so if the person feels bad they do not enter, we do not agree due to the impracticability of the implementation of CPR</u></i></p>	<p>Should they explain better what CPR refers to? Do we need to have the equipment? or is it the act of CPR? And if this is addressed in first aid training, we propose that the standard indicate...they should be trained in first aid including CPR, electric shock....</p>	<p>While a pre-shift health check is a good practice to conduct on farm, it does not impact a facility's conformance to clause 2.68. The details of the requirements for this training will be outlined within the clause guidance, though the examples demonstrated within the clause provide a strong framework to help design the training.</p>
2.71	<p>Se solicita podria cambiar el formato no como politica sino como procedimiento.</p> <p><i><u>It is requested that the format could be changed not as a policy but as a procedure.</u></i></p>	<p>It should not be subject to a policy but rather a document that could be a procedure, instructions, protocol, among others.</p>	<p>GSA agrees to update the clause text to state: 'policy or procedure' and will also clarify the range of acceptable evidence through guidance.</p>
2.80	<p>Creemos que deberian sacar el punto ya que se aborda en le punto xxx</p> <p><i><u>We believe that they should remove the point since it is addressed in the point.</u></i></p>	<p>This point is redundant, since it could be seen in point 2.68 as training in first aid and response plan for falls into the sea and drowning, we propose...The farm employees responsible for the Emergency Response Plan must be trained and have written documents corresponding to the safe operation of vessels.....</p>	<p>GSA disagrees with this comment overall. A more comprehensive, farm-wide training on vessel safety is needed to ensure worker wellbeing, while a training on the ERP for a smaller group of individuals would focus on different topics.</p>

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Section E. Environmental - Water Quality	<p>Aquaculture sites should be carefully chosen or designed so as to ensure the adequate flow of clean water of suitable quality according to species' requirements. Water quality parameters must be regularly monitored at various depths and maintained in an optimal range for the species. The water quality risk assessment must be coupled with an action plan once poor water quality is detected. Producers must maintain accurate records of water quality parameters and publish data periodically and centrally. Water quality (at least turbidity, total dissolved solids, oxygen, ammonia, carbon dioxide, temperature, pH, salinity and, in the freshwater context, nitrate) must be monitored regularly using an appropriate technical device for each parameter, with a frequency appropriate for both the species and the system in order to avoid deleterious impacts on welfare. Suboptimal water quality must be rectified as quickly as possible.</p>	<p><del>Most farms measure dissolved oxygen levels frequently or continuously to ensure the well-being of their fish, but determination of metabolites such as phosphates and ammonia is not considered necessary for BAP certification for a single farm, except where this is already required as a condition of the farm's operating permits.</del></p> <p><u>Aquaculture sites should be carefully chosen or designed so as to ensure the adequate flow of clean water of suitable quality according to species' requirements. Water quality parameters must be regularly monitored at various depths and maintained in an optimal range for the species. The water quality risk assessment must be coupled with an action plan if poor water quality is detected. Farms shall measure total dissolved solids, oxygen, ammonia, carbon dioxide, temperature, pH, salinity, and other parameters deemed important as it relates to both the health and welfare of the farmed species in addition to wild populations, the surrounding environment, and defined sediment impact zones.</u></p> <p><u>In regards to offshore farms: Aquaculture sites should be carefully chosen or designed so as to ensure that water currents and waves do not cause stress to the fish or negatively impact their health and welfare.</u></p>	<p>GSA agrees that this provided helpful guidance regarding best practice for location of sites, and will therefore include this in guidance. However, ammonia (Jansen et al 2018) and CO2 monitoring is deemed not necessary in open ocean systems. Water flow sufficient to maintain proper DO levels is sufficient to dilute to inconsequential the concentrations, and CO2 addition is mitigated by the carbonate buffering system in seawater.</p> <p>With respect to offshore farms, "offshore" will have to be defined if this is included.</p>
Section E. Environmental: Forage Fish Dependency Ratio	<p>FFDR: There should be a cap on the overall use of marine ingredients when byproducts are included in the FFDR calculation.</p>	<p>Recommend including cap on marine ingredient use when byproducts are included in FFDR calculation.</p>	<p>GSA supports the use of byproducts in feeds. Imposing a cap on total marine ingredients only in cases where byproducts are used could have an undesired consequence of discouraging the use of byproducts. Besides this, if a cap on overall marine ingredients was considered, data on total marine ingredients in feeds would have to be collected over time to inform cap metrics.</p>

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Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients	<p><u>Widespread industry uptake of farming insects for use as aquafeed to sustain carnivorous fish farms could pose a variety of risks. Considering the availability of plant-based alternatives, insect agriculture for aquafeed does not prove beneficial from a risk-benefit analysis.</u> Alternative feed products, such as algal oils, bio processed soybean meal, and lima bean flour, should be used in the place of animal products, to the extent they do not impair health and welfare. Farms shall choose the most traceable and sustainable alternative feed product available according to their region. Where FMFO is used, the maximum proportion of animal products used should be sourced from offcuts and byproducts of human animal consumption.</p>	<p>Like many renewable resources, reduction fisheries can be vulnerable to overexploitation if they are not responsibly managed and there are limits to the amount of fishmeal and fish oil they can sustainably supply. The BAP program therefore supports the use of feed ingredients derived from terrestrial sources and novel processes as well as fishmeal and fish oil produced from by-products or from aquatic species that are invasive or cultivated.</p> <p><u>Insect-based meal has been proposed as a viable alternative to traditional marine ingredients, however, we prohibit the use of insects in feed considering the use of it as a sustainable, welfare-friendly replacement is uncertain at this time. The use of feed containing meat or oil derived from marine mammals is also prohibited.</u></p>	<p>GSA believes in the need to utilize a broad spectrum of responsibly-sourced ingredients to meet the nutritional demands of aquaculture, particularly that of salmon. With that, ongoing research and field trials have demonstrated the efficacy of insect meal as a supplemental or alternative source of animal protein with positive rearing benefits for the fish. GSA will continue to monitor ongoing research in insect welfare, however at this time believes it serves an important role in feed formulations.</p>
Section E. - Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	<p>Underwater cameras and software systems that allow for more in-depth observations of the animals must be utilized to monitor behavior during various and regular times throughout the production cycle. Staff should actively monitor and record animal behavior during the feeding process, in addition to handling procedures, predetermined daily intervals, etc. in order to help generate improved health and welfare practices on the farm.</p>	<p>3.15: Farms shall have systems in place, such as underwater cameras and software, to allow farm staff to actively monitor feeding behavior during the feeding of fish. To avoid feed wastage, staff responsible for feeding the fish shall be trained in fish behavior and estimation of satiety and should slow down and end feeding appropriately.</p> <p>These systems shall also be employed throughout various processes of the production cycle in order to observe and describe behaviors, and identify any remedial actions that need to occur based on observations.</p>	<p>We will consider including in guidance a suggestion that the use of cameras to observe fish behaviour for welfare indices, outside of feeding times, and especially around times of handling, is a good practice. Scheduled and “predetermined daily intervals” may be impractical.</p>

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Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients – Standards	<p>The standards don't go as far as discouraging the use of FMFO. They encourage the use of "feed ingredients derived from terrestrial sources and novel processes as well as fishmeal and fish oil produced from by-products or from aquatic species that are invasive or cultivated."</p> <p>"In addition, by improving the efficiency with which feed is converted into fish biomass, farmers can lessen the amount of fishmeal and fish oil used." This is positive that the standards recognize the importance of efficient use of feed. This has positive effects on sustainability (less use of FMFO) and also the water quality.</p>	<p>BAP should encourage the use of alternatives such as, fish trimmings (or waste from other agricultural processes where suitable, e.g., poultry), algal oils, etc.</p> <p>The use of land-based ingredients like soy and palm oil should also be discouraged in favour of more sustainable alternatives.</p> <p>BAP should provide instructions on reducing and reporting food waste. There should be a clause that provides instruction on how to maximise efficacy of feeding salmon. This should include instructions on how to prevent food waste and monitor for wasted food in the water. This could include measurements of water quality after feeding time.</p>	<p>That's addressed through 3.15 and associated guidance.</p> <p>Rather than discourage certain ingredients, we make sure to encourage sustainable ones through the standard.</p> <p>BAP's focus through standards is to encourage and incentivize the use of responsible ingredients, rather than focus on disincentivizing specific ingredients within the supply chain. Additionally, the requirements and associated guidance to clause 3.15 should address the remaining concerns of this comment.</p>
Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	Need to correct language in the Standard that mentions the 75% responsible sourcing of fish meal and fish oil.	For salmonid feeds, since June 2021 the BAP Feed Mill Standard Issue 3.0 required that 75% of fishmeal and fish oil derived from reduction fisheries shall come from sources that are either certified by the Marine Stewardship Council (MSC) or MarinTrust.	GSA agrees with these suggestions and will update the language accordingly.
Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	"The BAP program therefore supports the use of feed ingredients..."	Should be more engaged in finding alternatives - "The BAP program therefore actively encourages the use..."	GSA agrees with these suggestions and will update the language accordingly.

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Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	"farms shall obtain documents from their feed suppliers that list the type and inclusion rate of all non-marine ingredients used at inclusion rates over 10%"	Should be reduced as many ingredients in a feed formulations are at levels <10%. Suggest 1% used.	In discussions with the Technical Committee and BAP feed mill partners, ingredients at 5% inclusion or greater are considered major ingredients and could be readily reported, while inclusion rates below 5% are minor ingredients less robust traceability management. GSA proposes a 5% reporting rate for now.
Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	Implementation: Given that some feed manufacturers already claim that c.90% of ingredients are Marin Trust/MSC cert. there would seem to be room for a more ambitious target than "by June 2025, 75% of fishmeal and fish oil derived from reduction fisheries shall come from sources that are either certified by the Marine Stewardship Council (MSC) or MarinTrust.	Algal oil, rich in both EPA and DHA, should be specifically mentioned as an alternative ingredient that is available at scale already now. This ingredient can enable the industry to achieve more ambitious targets on responsible sourcing now, whilst work is being done to evaluate and certify existing sources of marine ingredients.	The sentence referenced refers to a requirement in the BAP Feed Mill Standard which is provided for context. The farm standard encourages the sourcing of feed from BAP certified feed mills or other feed mills in compliance with section 4. For consistency, this standard attempts to align with the Feed Mill Standard and will not set criteria that are more stringent.  For algal oil, this is not currently approved as a feed ingredient in all countries currently producing salmon feeds. The availability of algal oil is likely also a factor. Algal oils also do not supply as many other nutritive factors as other marine oil sources do. However, we can consider mentioning this as an example of an alternative feed ingredient in guidance.
Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	"fishmeal and fish oil derived from trimmings, by-products or other processing wastes, or invasive or aquacultured species are NOT included."	How is the sustainability of the fish by-products and trimmings regulated? Isn't there a risk here that material from IUU fish (e.g. some Tuna fisheries) is unwittingly discounted from the formula?	For algal oil, this is not currently approved as a feed ingredient in all countries currently producing salmon feeds. The availability of algal oil is likely also a factor. Algal oils also do not supply as many other nutritive factors as other marine oil sources do. However, we can consider mentioning this as an example of an alternative feed ingredient in guidance.

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Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	<p>It's great that the BAP Feed Mill Standard, Issue 3.1 requires that by June 2025, 75% of fishmeal and fish oil derived from reduction fisheries shall come from sources that are either certified by the Marine Stewardship Council (MSC) or MarinTrust. This demonstrates the industry is committed to responsible use of certified sustainable ingredients.</p> <p>This requirement offers an opportunity to align with the new requirements measuring and reducing the Foraged Fish Dependency Ratio (FFDR) by including alternative omega-3 oils from plants and algae to meet the 75% traceability requirement.</p>	<p>For salmonid feeds, the BAP Feed Mill Standard, Issue 3.1 requires that by June 2025, 75% of fishmeal and fish oil derived from reduction fisheries shall come from sources that are either certified by the Marine Stewardship Council (MSC) or MarinTrust. Certified sustainable plant or algae-based omega-3 oils may be utilized to meet these requirements.</p>	<p>GSA will consider how best to reference algal oils and other novel marine ingredients within the associated clause guidance. While the goal of this requirement is to demonstrate the responsibility of the marine ingredients utilized, which algal oils often complement, there are additional challenges presented in these scenarios. Firstly, algal oil is not currently approved as a feed ingredient in all countries currently producing salmon feeds, presenting challenges to the verification and applicability. Additionally, algal oils also do not supply as many other nutritive factors as whole marine oil sources do, which must be considered in relation to responsible rearing overall.</p>
Section E. Environmental – Forage Fish Dependency Ratio	<p>"For extenuating circumstances where catastrophic mortality events, such as caused by environmental factors or Disease"</p>	<p>Need to specify what 'catastrophic mortality' equates to. Is it &gt;15% of the population based on 85% survival required in clause 4.19? If so, this should be referenced at this point.</p>	<p>Rather than define catastrophic mortality in a quantitative term, GSA believes it most fits the intent of this clause to define this as a mass mortality event that is correlated to a single mortality cause over a short period of time.</p>
Section E. Environmental - Sustainability of Fishmeal, Fish Oil, and Other Key Feed Ingredients - Standards	<p>Need to correct language in the implementation that mentions the 75% responsible sourcing of fish meal and fish oil.</p>	<p>For salmonid feeds, since June 2021 the BAP Feed Mill Standard Issue 3.0 required that 75% of fishmeal and fish oil derived from reduction fisheries shall come from sources that are either certified by the Marine Stewardship Council (MSC) or MarinTrust.</p>	<p>GSA agrees with these suggestions and will update the language accordingly.</p>

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Section E. Environmental - Predator and Wildlife Interactions	<p>The language of this section is currently almost exclusively oriented towards predator interactions, and needs to include language or requirements related to impacts of farms on non-predator species (wildlife interactions). It is also incorrect to limit the section only to “physical interactions”, i.e. wildlife coming into direct physical contact with the farm. The section must also address wider-field “biological interactions” with ETP’s, such as are being considered in the case of Maugean skates in Australia.</p>	<p>Need to include language in the guidance that addresses interactions with non-predator ETP’s.</p> <p>Also:</p> <p>3.60: Local rules notwithstanding, the farm shall develop and implement a written Wildlife Interaction Plan (WIP), which shall define procedures for the management of wildlife interactions and predator controls. These shall include predator-specific and ETP-specific response plans.</p>	<p>GSA agrees with this comment overall and will plan to include additional guidance regarding the WIP to ensure that non-predator and other wildlife interactions are explicitly considered.</p>
Section E. Environmental - Control of Escapes - Use of Sterile Fish	<p>The use of sterile farmed salmon (fish that are not capable of reproducing) can substantially reduce the risk of genetic introgression from farmed salmon into wild salmon populations, if an escape were to occur. The use of sterile salmon, such as produced through the induction of triploidy, is encouraged.</p> <p>Techniques to produce sterile salmon that cannot interbreed with local wild salmon if they escape are the subject of current research. This will be kept under review by the BAP program and its advisors and may be a future requirement for certification.</p>	<p><i>Report from 2023: The Norwegian Scientific Committee for Food and Environment states: “Triploid salmon are often found to have poorer fish health and welfare than diploid counterparts, under commercial farming conditions. These fish are, for example, more prone to skeletal and heart deformities, cataracts, more susceptible to skin ulcers, and cope less well with stressful events and handling. Other observations in cages or field data point towards more susceptibility to infections by infectious salmon anemia (ISA) or ulcer development due to the bacterium <i>Moritella viscosa</i>”. As a result, triploid salmon is not allowed in Norwegian farming.</i></p> <p><i>The use of sterile farmed salmon could have negative effects on animal health and welfare during production. Therefore, more holistic methods of biosecurity protection must be required at this time and a precautionary approach must be taken when considering the effects of genetic manipulation. There could be unintentional impacts on fish behavior, problematic implementation methods, and ethical concerns of genome editing that must be thoroughly researched and validated before BAP proposes this as a future requirement for certification.</i></p>	<p>BAP standards encourage technologies or practices that further drive responsible practices, including those that reduce the risk of genetic introgression into wild populations. However, as this is a developing, dynamic issue, BAP will continue to monitor the science over the long term and reflect this in the content of the standard. We will discuss whether the mention of triploidy here should be removed. We will consider whether it is appropriate to require extra management strategies specific to triploid fish.</p>

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Section E. Environmental - Predator and Wildlife Interactions	<p>The BAP program strongly encourages farms to employ humane, non-lethal measures for predator exclusion and/or control, even when lethal methods are permitted.</p> <p>However, lethal predator control techniques should not be used on any species, regardless of their endangerment status. Harmful or lethal measures to control predators should be banned, and the use of preventative measures e.g. double netting to ensure wild animals cannot access the farms should be required.</p>	<p><u>Lethal predator control methods are not permitted unless human safety is at risk or an independent environmental audit provides justification for such control, and specific written permission for an alternative means of control has been granted by the regulator with jurisdiction.</u></p> <p><u>Farms shall record and report all predator mortalities (species and numbers) regardless of their endangerment status, accompanied by a written plan that details further preventative measures the farm will take to minimize predator interactions. If a new off-shore facility is under consideration, siting of the location should avoid areas that marine mammals are known to frequent, thus reducing the need for deterrents.</u></p>	<p>Following a review of the proposed changes, GSA agrees with the provision to evaluate and review all predator mortalities, regardless of conservation status, as well as the enhanced consideration of marine mammals for new sites. However, at this time GSA does not seek to require farms to publicly report all predator mortalities, but rather to implement the internal procedures to minimize and reduce interactions over time.</p>
Section E. Environmental - Storage and Disposal	Expand reference to include other plastic waste.	Cage farms, particularly as a result of storm damage, can become sources of 'ghost' gear and other plastic waste that can entangle and endanger wildlife.	GSA agrees with the edit. We will make this change to the standard.
Section E. Environmental - Storage and Disposal	Need to include some references to antifoulant use – one possible example is cited:	<p><u>Amara I, Miled W, Slama RB, Ladhari N. Antifouling processes and toxicity effects of antifouling paints on marine environment. A review. Environ Toxicol Pharmacol. 2018 Jan;57:115-130. doi: 10.1016/j.etap.2017.12.001. Epub 2017 Dec 8. PMID: 29258017.</u></p> <p><a href="https://pubmed.ncbi.nlm.nih.gov/29258017/">https://pubmed.ncbi.nlm.nih.gov/29258017/</a></p>	GSA agrees with the inclusion of the cited reference. We will review this link, and others, for inclusion within the standard update.
Section E. Environmental - Storage and Disposal	Need to incorporate comments (and any appropriate additional auditable requirements) submitted by Dr. John Hargreaves to GSA on March 12, 2024, concerning biofouling control.		GSA agrees with these suggestions and will update the language accordingly.
3.1	<p>Solicitar detalle de que considera bajo 60m (vertice, promedio, etc)</p> <p>Request details of what is considered below 60m (vertex, average, etc.)</p>		GSA agrees with this suggestion and plans to include within the guidance to clause 3.1 a clear definition of how to determine a site's eligibility for the clause, and whether it is calculated per cage or per farm.

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3.2	<p>Puede ser alguien especializado interno? Could it be someone specialized internally?</p>	<p>In companies there are specialized personnel in charge of all environmental analyses, referring to bentos, in addition to complying with regulations, so I do not see that it is necessary to have a person independent of the company, so I propose that the standard change to... The center must nominate an independent person or company or demonstrate the competencies of internal personnel, in all cases with demonstrated experience in sediment sampling, and analysis to design a Sediment Monitoring Plan appropriate to farm conditions and to perform sediment analysis.</p>	<p>GSA agrees with the intent of the proposed edit, as it may be possible for individuals within an organization to complete these responsibilities responsibly. The clause will update the term "independet" to "qualified" and GSA will detail in the associated clause guidance how this can be demonstrated.</p>
3.3	<p>Modelación implica costos. Metodología PMS que no requiera modelación (30, 50, 100 m desde la granja, por ejemplo). Modeling involves costs. PMS methodology that does not require modeling (30, 50, 100 m from the farm, for example).</p>		<p>GSA disagrees with this suggestion. The intent of this clause is to ensure that farms are accurately modelling deposition at the farm site, which we believe can only be effectively achieved with modelling software. While we recognize the cost constraints of these tools, discussions with our Technical Committee have confirmed that independent contractors exist globally to support these requirements.</p>
3.4	<p>Saber que límites de Cu se tendrán para definir niveles de activación Know what Cu (copper) limits will be used to define activation levels</p>		<p>The expectation of this requirement is that the farm defines its own trigger levels based on their explicit understanding of the natural environment they are operating in. GSA will discuss with the Technical Committee whether a concentration range can be specified, and will further detail in clause guidance the expectation to set a unique trigger level for the farm.</p>
3.5	<p>Podría establecerse este criterio también para PMS en vez de modelación This criterion could also be established for PMS instead of modeling</p>		<p>GSA was unable to determine the intent of this suggestion and attempted to follow up with the commenter, following no additional context, GSA has no further comment on this issue.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
3.6	Que se defina un limite de impacto para cobre That an impact limit be defined for copper		The expectation of this requirement is that the farm defines its own trigger levels based on their explicit understanding of the natural environment they are operating in. GSA will discuss with the Technical Committee whether a concentration range can be specified, and will further detail in clause guidance the expectation to set a unique trigger level for the farm.
3.6	Add a requirement to report any trends towards exceedance of trigger levels	The detection of any trend towards exceedance of the farm's established "trigger level" indicators shall be immediately followed by corrective actions to bring conditions back within acceptable levels, and such incidences shall be reported immediately to the Certification Body and to BAP.	GSA disagrees with this suggestion overall. The intent of this clause is to get farms to monitor and to correct problems before trigger levels are exceeded, rather than after the fact. It is not appropriate nor justifiable to require immediately reporting of a trend. It is the facility's responsibility to carefully document their trigger levels and any instances of this trend towards exceedance, as well as the corrective action taken. This documentation will be reviewed annually by the auditor and will provide sufficient validation.
3.8	which is considered maximum biomass, the regulations for Chile that indicate 2 months before harvest can be considered.		The maximum feeding rate is a better predictor of maximum deposition under a site than the length of time before harvest is, and this is recognized by local regulation regarding monitoring, in most regions. We will keep peak feeding as the parameter
3.10	Que quiere decir recientemente ampliadas? Mayor biomasa? Número adicional de jaulas? What does recently expanded mean? Greater biomass? Additional number of cages?		This clause relates to sediment deposition and water quality which would increase with increases in the total biomass on a site. We will refine the language of the clause to indicate biomass increases.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.14	In the guidance section concerning Water Quality under Section 4, a correction is needed for calculation of loading index, used in clause 3.14, i.e., to reduce the harvested weight of the year class by the weight of juvenile fish at the time of stocking, since feeding of the juvenile fish occurred at a different location from the farm, and such loads should have been accounted for under either the hatchery certification, or under the marine cage smolt site certification.	<p>data shall be recorded in audit reports:</p> <p>Net weight of fish produced per year class crop (kg)</p> <hr/> <p>(harvested weight minus the weight of juvenile fish at initial stocking)</p>	GSA agrees with this suggestion overall and will adjust the description of this calculation accordingly.
3.16		BAP should stipulate that all fish products in the supply chain come from fish that have been subject to pre-slaughter stunning.	After considering this request, GSA does not believe this requirement to be realistic based on the state of the fishmeal supply chain, nor would GSA be able to confidently uphold this claim within the marketplace. At this time, GSA does not agree with the proposed change.
3.16	This clause references being in line with BAP Feed Mill Standard. In the implementation section, it is further defined as Issue 3.0. It is important that the certification references the newest feed standard version, if and when that comes out. It would also be beneficial to reference the Vanguard standard in the implementation section, as the preferred standard to align to for feed requirements.	“requirements stated in the latest BAP Feed Mill Standard”	Thank you for pointing this out. We will review the implementation section and update this such that it references the current feed standards without stating a version number, as you suggest.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.17	There are several non-marine ingredients that will not account for 10% of the feed mix, but will still be core components. It is important to have traceability for those ingredients as well. Recommend shrinking this requirement to 5%.	"non-marine ingredients at levels of 5% or more"	In discussions with the Technical Committee and BAP feed mill partners, ingredients at 5% inclusion or greater are considered major ingredients and could be readily reported, while inclusion rates below 5% are minor ingredients less robust traceability management. GSA proposes a 5% reporting rate for now.
3.17	"non-marine ingredients at levels of 10%"	Again, recommend reducing this to ensure full traceability as many ingredients are included in feed formulations <10%. Suggest 1%.	In discussions with the Technical Committee and BAP feed mill partners, ingredients at 5% inclusion or greater are considered major ingredients and could be readily reported, while inclusion rates below 5% are minor ingredients less robust traceability management. GSA proposes a 5% reporting rate for now.
3.20	Associated with the information requested from the last calendar year for the indicated clauses:  because we must calculate something from a process that exceeds the year of BAP certification		We recognize that this is a challenge, especially for newly certified farms which may not have access to this data. BAP certification is process certification which verifies the quality of management processes rather than the quality of the product, and presumably farm management is consistent from year to year so extrapolation to the following production cycle is applicable. GSA will address this through guidance and notes in implementation.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.21	How were these FFDR limits determined? They are not representative of best practice in salmon production. GSI 2015 data showed mean FFDRo of 1.87 (median 1.89) and only one over 3.0; a cursory review of the page today (5/6/2024) shows only improvement and only Chinook salmon exceeding 3.0. ASC is set at 2.52 (salmon/steelhead) in their existing marine salmonid and proposed aligned farm standard.	At least to 2.52 for parity with ASC, which is still considered too high by SFW. We suggest an analysis of best performance, which should be defined as the top X% of performance, and setting the threshold appropriately.	GSA discussed this topic at length with the Technical Committee and have agreed to keep the values as is, with a commitment to review all FFDR data collected within 24 months of the standard being published, and to consider adjustments based on this data.  FFDR is a new indicator for BAP so thresholds were deliberately set at these levels to allow BAP to collect time-series data on what is appropriate in regions where BAP-certified farms are located. Factors such as differences in fish meal and fish oil supply could result in different FFDR numbers between North America, where most BAP farms are located, and regions where past FFDR data has been collected. Simply aligning with other standards is not appropriate because goals and objectives differ between standards and program delivery (e.g. management of nonconformances, etc.) differs between certification schemes.
3.21	"FFDRo of 3.0"	This is incredibly high and many farmers are already well below this level (~1.6 in Norway). Many retailers are also signing up to FFDR <1 (WWF basket, Earthworm Foundation and more in the pipeline). There is room for a much more ambitious target here, especially by encouraging the use of alternative/novel ingredients to reduce the reliance on wild fish.	GSA discussed this topic at length with the Technical Committee and have agreed to keep the values as is, with a commitment to review all FFDR data collected within 24 months of the standard being published, and to consider adjustments based on this data.  FFDR is a new indicator for BAP so thresholds were deliberately set at these levels to allow BAP to collect time-series data on what is appropriate in regions where BAP-certified farms are located. Factors such as differences in fish meal and fish oil supply could result in different FFDR numbers between North America, where most BAP farms are located, and regions where past FFDR data has been collected. Simply aligning with other standards is not appropriate because goals and objectives differ between standards and program delivery (e.g. management of nonconformances, etc.) differs between certification schemes.
3.21	This should be covered in the Feed Standard and not repeated in the Salmon Standard.	Move to Feed Standard only.	FFDR can only be calculated by farms. Feed mills do not have data from farms concerning initial stocking biomass, mortality, final harvest weight, or feed use, which are all needed to make FFDR calculations. Farms also might use feed from more than one manufacturer, so only farms are capable of accurately calculating these metrics, using their own data together with the data provided by their feed suppliers. The requirement will be retained.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.21	The FFDRm of 1.5 or less and the FFDRo of 3.0 or less is set far too high. From industry supplied data we have calculated in Scotland, <i>Salmo salar</i> has an FFDRm of 0.77 and FFDRo of 1.61. In Norway, <i>Salmo salar</i> has an FFDRm 0.65 and FFDRo of 1.9.	Suggest that the FFDRm is set at 1.0 or less. FFDRo of 2 or less.	<p>GSA discussed this topic at length with the Technical Committee and have agreed to keep the values as is, with a commitment to review all FFDR data collected within 24 months of the standard being published, and to consider adjustments based on this data.</p> <p>FFDR is a new indicator for BAP so thresholds were deliberately set at these levels to allow BAP to collect time-series data on what is appropriate in regions where BAP-certified farms are located. Factors such as differences in fish meal and fish oil supply could result in different FFDR numbers between North America, where most BAP farms are located, and regions where past FFDR data has been collected. Simply aligning with other standards is not appropriate because goals and objectives differ between standards and program delivery (e.g. management of nonconformances, etc.) differs between certification schemes.</p>
3.21	We are supportive of adding FFDR, but believe the current FFDR requirements are too high, with a majority of companies already meeting them (see GSI Sustainability report and this 2020 report on Norway for reference). The average FFDR in Norway is .5 for FFDRm and 1.5 for FFDRo. According to the GSI 2022 Sustainability Report, the max FFDRm across all geographies was 1.43 and lowest was .15, with a majority coming under 1. On the FFDRo side, only one company came in above 3, with a majority sitting below 2 and the best reaching .63. The FFDR requirements as written are therefore already met by most companies. The requirements must be lower to create change.	"FFDRm of .8 or less and FFDRo of 1.5 or less"	<p>GSA discussed this topic at length with the Technical Committee and have agreed to keep the values as is, with a commitment to review all FFDR data collected within 24 months of the standard being published, and to consider adjustments based on this data.</p> <p>FFDR is a new indicator for BAP so thresholds were deliberately set at these levels to allow BAP to collect time-series data on what is appropriate in regions where BAP-certified farms are located. Factors such as differences in fish meal and fish oil supply could result in different FFDR numbers between North America, where most BAP farms are located, and regions where past FFDR data has been collected. Simply aligning with other standards is not appropriate because goals and objectives differ between standards and program delivery (e.g. management of nonconformances, etc.) differs between certification schemes.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
3.21	<p>The FFDRm and FFDRo are way above current practices. Low FFDR requirements are important to push the industry to reduce their reliance on reduction fisheries.</p> <p>You could take a look in the sustainability reports of the feed manufacturers (Skretting, Cargill...) where they report the average FFDR of their feed to get a better idea of the current practices.</p> <p>Also, French retailers part of the Aquafeed Initiative have the objective to reach a FFDRm=1 and FFDRo=1 by 2030 for salmon.</p>	I suggest FFDRm of 1 and FFDRo of 2 or less.	<p>GSA discussed this topic at length with the Technical Committee and have agreed to keep the values as is, with a commitment to review all FFDR data collected within 24 months of the standard being published, and to consider adjustments based on this data.</p> <p>FFDR is a new indicator for BAP so thresholds were deliberately set at these levels to allow BAP to collect time-series data on what is appropriate in regions where BAP-certified farms are located. Factors such as differences in fish meal and fish oil supply could result in different FFDR numbers between North America, where most BAP farms are located, and regions where past FFDR data has been collected. Simply aligning with other standards is not appropriate because goals and objectives differ between standards and program delivery (e.g. management of nonconformances, etc.) differs between certification schemes.</p>
3.22	FFDR level set not to exceed 5 is exceptionally high. I would suggest the only species at this level would be farmed bluefin tuna. For most finfish species at level of 3 maximum should be the starting point, to be further refined by future datasets, which the objective of reducing this number further.	Suggest FFDR should not exceed 3.	<p>GSA discussed this topic at length with the Technical Committee and have agreed to keep the values as is, with a commitment to review all FFDR data collected within 24 months of the standard being published, and to consider adjustments based on this data.</p> <p>FFDR is a new indicator for BAP so thresholds were deliberately set at these levels to allow BAP to collect time-series data on what is appropriate in regions where BAP-certified farms are located. Factors such as differences in fish meal and fish oil supply could result in different FFDR numbers between North America, where most BAP farms are located, and regions where past FFDR data has been collected. Simply aligning with other standards is not appropriate because goals and objectives differ between standards and program delivery (e.g. management of nonconformances, etc.) differs between certification schemes.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
3.29	<p>A que Se refiere el unto con inspectores calificados? Podria ser profesional interno de la empresa calificado? Y aclarar si es anual o por ciclo productivo y si es anual podria ser verificado sin producción.</p> <p>To strengthen the issue with qualified inspectors? Could you be a qualified internal professional of the company? And clarify if it is annual or by production cycle and if it is annual it could be verified without production.</p>	<p>The point is met, but it is not clear whether it is a productive year or a calendar year? I propose,... be examined by qualified inspectors at least once a productive year, if there are permanent personnel, evidence their qualifications and repaired or replaced as necessary....</p>	<p>Since site audits are done annually, whether the site is in production or not, the clause will remain unchanged. Inspectors are permitted to be internal to the company, but whether internal or external must be proven to be qualified through valid training documentation which could include on-the -job training.</p>
3.31	<p>This is a considerable change from Version 2.4, and will negatively affect compliance with BAP. Local regulations stipulate monthly (every 30 days) sub surface checks, so this would be superseding the provincial regulations that Canada East has to comply with.</p>	<p>Modify language to require surface inspections in accordance with local regulatory standards or a minimum of every 30 days.</p>	<p>In discussion with the standard Technical Committee, GSA recognizes the serious operational challenges associated with biweekly sub-surface inspections in certain regions, however the intent of robust oversight of cages remains. With this, GSA has proposed an update to the clause requiring biweekly subsurface inspections, though a detailed onsite risk assessment can be used to justify monthly sub-surface inspections. GSA will help define components of this risk assessment in the associated clause guidance, and may include components such as predation seasonality, meteorological trends, escape prevalence, etc.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
3.33	<p>El personal de las empresas en Chile estan con os cursos certificados por la autoridad maritima, asi mismo en cada centro hay servicio de roboticos submarinos, quienes inspeccionan todos los dias los modulos y mas aun si hay algún tipo d emanego, creemos que es inecesario el protector para helices, considerando que en cada centro son al menos 2 embarcaciones y tenemoas mas de 10 centros. y en la historia de nuetsra empresa nunca se ha indicado algun daño a las redes por helices.</p> <p>The personnel of the companies in Chile have courses certified by the maritime authority, likewise in each center there is a service of underwater robotics, who inspect the modules every day and even more so if there is some type of management, we believe that it is unnecessary. propeller protector, considering that in each center there are at least 2 boats and we have more than 10 centers. and in the history of our The company has never indicated any damage to the nets due to propellers.</p>	<p>evidencing in Chile the statistics of fish escape through net openings by boats this is zero, so the propeller protectors do not make sense, the industry already has qualifications to which they must handle the boats authorized by the maritime authority, this is a cost high for companies considering that there are at least 2 vessels per center and there are several centers per company. I think you should consider removing the request to install a propeller protector, since it does not really generate value in Chile, or putting an exception clause in Chile.</p>	<p>The intent of this clause is that the farm shall justify what is in place to minimize the risk of contact between boats and nets. If guards are not needed because other equipment or procedures cover this, it's justifiable. By saying "such as guards on propellers..." the clause specifies equipment and procedures that could be part of the farm's FCP to protect nets. It doesn't say "shall include, at a minimum, guards on propellers...."</p> <p>GSA will leave the language as written.</p>
3.40	<p>It is very impractical to count the remaining fish in a cage after an escape, the fish would have to be moved into another cage to get an accurate count requiring unnecessary fish handling. Many farms do not have an empty cage standing ready or the resources to transport the fish. In addition, there would be extra physical and welfare stress to the fish in the process.</p>	<p>No count requirement at the time of an escape should be required.</p>	<p>GSA disagrees with the proposed comment overall, as escapes are a significant environmental concern within the standard and managing escape events appropriately must be a priority. We will discuss this issue with the Technical Committee to determine if additional clause guidance can be developed on appropriate counting/estimation methods in the event of an escape.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
3.49	BAP suspends farms for fish escapes but there is no consequence for death of workers or visitors. Suggest adding wording to clause 3.49 to introduce such a requirement.	Any workplace accident which results in the death of a facility employee or visitor shall be reported immediately to the Certification Body and to BAP, and if there is evidence that the death was due to negligence on the part of the facility, shall result in immediate suspension from the BAP program.	GSA agrees with this comment and has already made the requisite updates to clause 2.51 in the standard.
3.50	Associated with the information requested from the last calendar year for the indicated clauses:  because we must calculate something from a process that exceeds the year of BAP certification		Within the interpretation guidance to this clause will be adequate detail on how new applicant farms will be assessed to this criteria.
3.52 & 3.55	Net-based cage salmon farms should not be located in areas designated as "critical" or sensitive".	Recommend removing the exemption clauses with clear regulation that farms be located outside of areas designated as "critical" or "sensitive".	GSA disagrees with the proposed comment. It is difficult to institute a clause that covers all circumstances based on species, location, environment, etc. Competent authorities designating the critical or sensitive nature of an area are the best to determine whether or not salmon farming will have an effect on the local habitat. If they allow salmon farming in the area it may not be prudent for BAP, without scientific data, to prohibit. The current language will remain.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.54 – 3.59	<p><u>We are concerned that these criteria wording are insufficient to capture the problem within Macquarie Harbour for the Macquarie skate – an endangered species. For the revised BAP Salmon standard to allow certification of farms, that are attributed to the decline of an ETP species, carries a significant environmental reputational risk for both the BAP programme and its certified farms in the area, not to mention exacerbating the decline of an endangered species. Salmon farms in this area should be relocated to avoid such impacts.</u></p> <p><u>Conservation Advice for Zearaja maugeana (Maugean skate) (environment.gov.au)</u></p>	<p>Suggest wording to be included:</p> <p>If the location and operation of the farm posed a serious threat to the long-term survival of an ETP species it must be relocated to an area that eliminates such threat or the farm will not be eligible for certification/recertification.</p>	<p>After considering the proposed changes, GSA does not believe these could be feasibly implemented into the standard with any level verifiable enforcement. There is no clear authority to define long-term threats at a spatial level outside of the permitting regulators, who make such considerations when designating habitat suitable for salmon aquaculture. While the goals of the proposed change are positive, we do not think inserting this clause would impact the enforceable requirements of the standard.</p>
3.58	Training is needed for 100% of the staff or only applicable staff defined by the farm		We will update the clause to say that the farm shall create a criteria for which staff positions should be trained and shall show training for people in these positions.
3.62 and 3.63		<p>Bap should establish requirements for passive control methods of water quality– they should not just be supplementary. They should be a requirement. BAP should also set out requirements for the regular/daily monitoring and maintained of passive control methods to ensure they are functional and not causing welfare issues.</p> <p>The monitoring should be daily and ensure that wildlife is not trapped or caught in the apparatus.</p>	The intent of clauses 3.62 and 3.63 relate to mitigating wildlife interactions, not controlling or monitoring water quality parameters. These are covered in the section on water quality.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.69	It is not clear how “actively favor[ing]” is auditable	More detailed requirements for demonstration that passive and/or active non-lethal methods are prioritized	The associated guidance for this clause will clarify this requirement and how compliance is met. Specifically, this will detail that active favoring is demonstrated through a clear procedure detailing the decision tree process for predator control methods, highlighting the use and prioritization of non-lethal methods. This will create an auditable framework for the clause.
3.69 - 3.81	Seal cracker/bombs deterrents use not consistent with appropriate animal welfare requirements, and are prohibited by other aquaculture standards.	Recommend timeline plan to phase-out use, and interim suspension consequence for mis-use.	Based on discussions with the Technical Committee, utilization of these devices and the associated feasibility of full phaseout varies widely. GSA agrees with the goal of eliminating the use of these devices, and has proposed the following additions to the standard: <ul style="list-style-type: none"> <li>- These devices shall only ever be deployed under the supervision of a trained animal health professional</li> <li>- Any facility currently utilizing these devices shall demonstrate a written commitment to phasing out the practice, primarily through active adoption and trial of alternative predator deterrence methods.</li> </ul>
3.70	“The farm shall have suitable passive or physical predator exclusion controls in place, unless the location of the farm, or extenuating circumstances, renders these unnecessary.” The clause does not state what passive or physical exclusion controls are acceptable.	The clause should specifically state what are acceptable exclusion methods and the extenuating circumstances that would mean they are unnecessary. The use of lethal control methods is not acceptable unless human safety is at risk or an independent environmental audit provides justification, and specific written permission for an alternative means of control has been granted by the regulator with jurisdiction.	Aquaculture industry practices changes as new technologies are developed, so providing a comprehensive list is not practical. However, examples of exclusion methods may be included. We will discuss outlining criteria for extenuating circumstances. If it is practical, this will be addressed through guidance.
3.72	It is positive that the farm shall record mortalities of wildlife and the corrective actions taken to prevent mortalities. However, this information should always be reported to BAP.	The clause must state wildlife mortalities are always reported. The clause specifies avian, mammalian and reptilian mortalities but should also specify wild fish. Instances of mortalities should be accompanied by a written report of the incident and plans for future interventions to avoid mortalities.	GSA agrees to add fish predator mortalities to the applicable list of required reporting elements. Regarding reporting mortality data, GSA will be requiring these datapoints to be captured in the audit report, while the remaining documentation on corrective action will be reviewed and verified by the third-party auditor.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.73	It is positive that the clause requires monitoring of active deterrence and requires that it reduce over time. However, some more detail is required.	<p>Firstly, the standards should specify examples of extenuating circumstances that would justify rates to not be decreasing over time.</p> <p>Secondly, records of trends should not just be available, they should be monitored to make sure trends are not increasing</p>	There are varied extenuating circumstances in which frequencies cannot be reduced, so providing a comprehensive list is not practical. However we will consider examples in the standard guidance. Second point: recording something infers monitoring, but we will refine the language around recording and analysing / monitoring the trends.
3.73	No defined acceptable degree of reduction over time	Define a required reduction over time	The reasons for trends in incidents are many and varied. Natural systems are often difficult to predict and manage. The intent of the clause speaks to the objective of overall reduction of incidents over time and associated management actions to reduce. A quantitative metric for reduction over time will not be given.
3.74-3.77	These clauses state that acoustic deterrents are acceptable	<p>Acoustic deterrents should not be used in the control of wildlife.</p> <p>Acoustic deterrents can cause long-term damage to the hearing of mammals, habitat displacement.</p> <p>Furthermore, they are not effective Seals get used to the noise and are not always deterred. It can create a 'Dinner-bell' effect where the noise become a 'conditioned reinforcer.'</p>	<p>Based on discussions with the Technical Committee, utilization of these devices and the associated feasibility of full phaseout varies widely. GSA agrees with the goal of eliminating the use of these devices, and has proposed the following additions to the standard:</p> <ul style="list-style-type: none"> <li>- These devices shall only ever be deployed under the supervision of a trained animal health professional</li> <li>- Any facility currently utilizing these devices shall demonstrate a written commitment to phasing out the practice, primarily through active adoption and trial of alternative predator deterrence methods.</li> </ul>
3.76	No guidance or requirements re: farm coordination	Define appropriate coordination requirements	GSA agrees with this comment overall and will plan to further detail expectations for farm coordination in the associated clause guidance.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.77	Language seems to be too limited	3.77: The farm shall only use non-lethal deterrents such as seal bombs / crackers, “bean bags”, seal scarer caps, or any form of lethal predator control, which are specifically authorized for use by the regional legislative authority.	Thank you for suggesting the addition of “non-lethal deterrents such as....” to the clause. We will suggest this addition.
3.85	Add prohibitions concerning locations where hazardous materials may be stored	3.85: The MSHWDP shall address the safe storage, warning signage, transport, handling, labeling, disposal and use of fuel, oil, lubricants, chemicals and other potentially toxic materials used on the farm to limit the risk of accidental spills, fires, explosions and release into the environment. Hazardous materials shall not be stored near feed or employee housing or dining areas.	GSA agrees to add the proposed language to the clause.
3.87	Need to update this language concerning secondary storage for fuel to refer to the storage container volume, not the volume of fuel stored.	3.87: For individual or multiple fuel storage tanks, secondary containment shall be provided equivalent to the total fuel container capacity plus 10%.	GSA agrees with the proposed comment and will develop a solution to include secondary containment within the clause requirements.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.97	<p>creemos que se debería cambiar la frase "Las granjas participarán en programas para probar alternativas al uso de pinturas antiincrustantes a base de tóxicos ..." por " Las granjas contaran con naplanificación para probar alternativas al uso de pinturas antiincrustantes a base de tóxicos"</p> <p>We believe that the phrase "Farms will participate in programs to test alternatives to the use of toxic-based antifouling paints..." should be changed to "Farms will have planning to test alternatives to the use of toxic-based antifouling paints"</p>	<p>We believe that the phrase "Farms will participate in programs to test alternatives to the use of toxic-based antifouling paints..." should be changed to "Farms will have planning to test alternatives to the use of toxic-based antifouling paints..." "</p>	<p>GSA agrees with the proposed comment as it strengthens the intent of the clause requirement.</p>
3.99	<p>What does management mean in this context? Management of active gears?</p>	<p>We recommend more explicit language and emphasis around gear loss prevention, for example, via a gear maintenance plan with routines and protocols for managing and assessing functionality of gears over time, as well as for minimizing risk of loss resulting from storm damage (eg. a storm management plan?)</p>	<p>Management in this context refers to the collection, storage, handling, transport etc of any gear or plastics found near the site, whether originating on site or not. Management of materials specifically originating on the site is covered elsewhere in the standard, though we will plan to coordinate with the TC to make these requirements more clear.</p>
3.99	<p>Is there an individual or team assigned to the management of plastics or aquatic debris or litter? Staff training toward management or avoidance of gear loss or marine debris/litter?</p>	<p>Consider assigning designated individuals and requiring training</p>	<p>GSA believes this is the responsibility of all staff employed on a farm. We plan to update the requirement for the gear management system that ensures appropriate resources are in place and all staff are appropriately educated.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
3.99	Will those that are not able to be recovered also be recorded? Are post-storm recovery efforts (or other recovery efforts) required?	Record gears that cannot be recovered, eg. In same logbook or in Global Ghost Gear Initiative's Ghost Gear Reporter App Recommend requiring recovery efforts and adequate training to safely do so	The intent of this clause is to ensure the collection and management of any gear or plastics found near the site, whether originating on site or not. We agree that any material originating from the site which cannot be recovered shall be recorded and will consider adding language to this effect.
3.99	Is there any requirement for gear to be marked?	Recommend marking to indicate ownership, following FAO guidance: <a href="https://www.fao.org/responsible-fishing/markings-of-fishing-gear/voluntary-guidelines-marking-fishing-gear/en/">https://www.fao.org/responsible-fishing/markings-of-fishing-gear/voluntary-guidelines-marking-fishing-gear/en/</a>	In discussion with the Technical Committee, it was determined that most salmon cage sites across the world are already marked. However, GSA plans to include an additional clause requiring that a plan should be developed for all cages and nets to be marked.
3.99	A procedure shall be in place for the management and recording of lost, "end of life" aquaculture or fishing gear or other plastics that may be recovered in the vicinity of the farm.	Suggest that in addition procedures should include recycling/reuse/repurpose wherever possible.	Due to the varied and changing nature of materials that aquaculture gear is comprised of, and varied nature of found plastics, it may be difficult to track the varied outlets for this material. However, we will consider adding some content to the implementation section on the preferred management of this material.  This has already been addressed in clause 3.92, as not all waste is feasibly recyclable.
3.100	Inorganic/non-biological waste produced from farm operations, and waste matter that is recovered from the marine environment shall be brought ashore to be disposed of in an authorized manner that will not have a detrimental impact on the environment. Records of how this waste material is disposed of shall be retained.	Suggest that local beach cleans should be carried out by aquaculture companies 3 times a year. Waste should be recorded, and records submitted to organizations that collect/collate data where available. Waste material should be correctly disposed off and recycled wherever possible.	Because beach clean-up activities mostly recover non-aquaculture related plastics, this is outside the intent of this clause. However, GSA also believes that this concept is appropriately accounted for in clause 2.9, and we will include in guidance the role of beach clean ups in this regard.

Audit Clause	Public Comment	Proposed Change	GSA Response
3.100	<p>Is there a waste disposal plan for the aquaculture facilities upon their decommissioning?</p> <p>What happens when there are not adequate disposal facilities- how are records maintained for those instances?</p>	Develop waste disposal plan that includes site decommissioning requirements. Maintain records for all gear disposal options (eg. Incineration, landfill, resale, recycling, PRF etc)	End-of-life aquaculture gear is covered in another clause so is not within the intent of this clause. However, GSA will consider how to incorporate content on site decommissioning to the implementation section.
Section F. Animal Welfare:	“Carbon dioxide asphyxiation, ice slurry slaughter and asphyxiation in air, shall not be used” – this is positive as it prohibits these inhumane slaughter methods.	The standards should also prohibit bleeding without effective pre-stunning.	GSA agrees to add bleeding to the list of prohibited activities without effective pre-stunning.
Section on Health and Welfare	Need to update language concerning “stocking density”	Biomass density shall not exceed 25 kg/m3, and site-specific biomass density criteria should be developed based on local conditions and be assessed using historical Operational Welfare Indicators.	GSA agrees to the proposed changes and will update the language.

Audit Clause	Public Comment	Proposed Change	GSA Response
Section F. Animal Welfare	<p>In order to be able to express their natural behaviors, aquatic animals must be provided with an enabling environment that is specific to their species and life-stage. To the extent that it is feasible, holding environments should be based on the preferred natural environment (in the wild) of the culture species thereby permitting the individuals to express behaviors important for their welfare (e.g., foraging, nesting, exhibiting choice and agency). For understudied species for which literature is scarce or nonexistent, farmers should attempt different types of enrichment and monitor outcomes whilst encouraging further scientific studies.</p>	<p><u>Forms of environmental enrichment should be integrated into existing farm structures, requiring minimum disruption and capital investment.</u>  <u>Implementing these interventions is a win-win situation for producers since they increase the welfare of the fish whilst improving productivity through improved growth performance, body condition, resilience and reduced mortality.</u> BAP acknowledges that enrichment is a developing practice in aquaculture and encourages farms to pursue novel strategies according to the best available science and with prior approval. Some suggestions include; lighting, water complexity, structures, shelter, etc. More information can be found <a href="#">here</a>.</p>	<p>GSA respects and is committed to the ongoing research on the role of environmental enrichment in aquaculture. However, we also stress that enrichment should exist to promote and facilitate behaviors natural and enriching to the animal, rather than induce stress or injury. GSA intends to follow emerging research and best practice in this space, especially in regard to positive enrichment and validation.</p>

<p>Section F. Animal Welfare</p>	<p>Animal welfare refers to the physical and mental state of an animal in relation to the conditions in which they live. In order to promote good welfare in captive animals, it is necessary to first determine what constitutes “good welfare” for a particular species using science-based measurements and assessment protocols. The most widely accepted paradigm is <u>The Five Domains Model</u>, a modernized version of the original Five Freedoms Model of animal welfare assessment. The Five Domains Model is regularly updated to reflect significant developments in animal welfare science thinking, such as the emerging interactions between physiological (biological health) and psychological (subjective experience) aspects of animal welfare and the critical importance of promoting positive experiences in addition to reducing pain and suffering in captivity. The Five Domains Model is generally considered the gold standard of holistic animal welfare assessment criterion and is extensively used to monitor welfare across a vast variety of species and contexts, including animals living in zoos, laboratories, farms, and private homes around the world.</p> <p>The Five Domains Model is outlined as follows:</p> <ol style="list-style-type: none"> <li>1. Nutrition - the quality, quantity, and method of delivery of the water and food available to animals.</li> <li>2. Physical Environment - the affective impacts of physical, sensory, and atmospheric conditions to which animals are exposed.</li> </ol>	<p><del>In fish farming, ensuring that fish are treated well and pain and suffering are avoided, results in what is considered good welfare.</del></p> <p>In accordance with The Five Domains Model of animal welfare, assessments must take into account physiological, psychological, behavioral and relational parameters. In practice, this means that striving to provide captive animals with a “life worth living” involves engaging in appropriate husbandry practices (maintaining optimal environmental conditions, providing all individuals with a nutritionally balanced diet, providing appropriate health care and monitoring, etc.) as well as providing animals with opportunities for positive experiences, (provide animals with the opportunity to exercise choice, including access to environmental variability and species-appropriate enrichment and housing animals in species-appropriate social groups that minimize aggression while promoting appropriate social interaction).</p> <p>Together, these interventions should aim to provide animals with a significantly higher quality of life than that previously experienced in captivity.</p>	<p>GSA recognizes the acceptance and validity of the Five Domains Model and agrees to mention this framework within the implementation notes as an acceptable reference point for designing animal welfare procedures.</p> <p>Within the clause language, GSA intends to maintain its current phrasing, as we assert that these five domains are more specifically addressed and tailored for marine salmon farming operations through the detailed clause requirements provided.</p>
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Audit Clause	Public Comment	Proposed Change	GSA Response
	<p>3. Health - the physiological and affective impacts of injury, disease, and varying levels of physical fitness.</p> <p>4. Behavioural Interactions - behavioral evidence of hindered and/or enhanced expression of agency when animals interact with (1) their environment, (2) other non-human animals, and (3) human beings.</p> <p>5. Mental State - psychological and affective consequences of domains 1-4.</p>		
Section F. Animal Welfare: Sea Lice	<p>The farm shall seek to reduce parasite load over time. When practical nonchemical treatments for sea lice are fully developed, such as the use of cleaner fish and/or mechanical delousers, their use may become a future BAP requirement.</p>	<p>There should be requirements for monitoring and demonstrating that levels are decreasing over time.</p> <p>The use of cleaner fish should not become a future BAP requirement. The use of cleaner fish should be prohibited and phased out of use in farms.</p>	<p>Requirement for procedures for the monitoring of endemic parasites within the Fish Health Management Plan is covered in clause 4.33 with the requirement for management procedures as part of an Integrated Pest Management Plan outlined in 4.40 and sub-clauses. Furthermore, Operational Welfare Indicators also judge the effect of sea lice on fish. Lastly, forcing reduction over time can have unintended consequences of fish health and environmental quality. A requirement for reduction over time will not be put in place.</p>
Section F. Animal Welfare: Sea Lice	<p>This is a positive that the protection of wild salmon from sea lice is considered as well as the farmed fish</p>	<p>There should be specific clauses that identify methods for reducing the risk of spread of parasites to wild fish and monitoring effectiveness of procedures that are in place to reduce the spread of sealice into the wild.</p> <p>It states the following "The rules and management shall include monitoring of sea lice loads and the setting of treatment trigger thresholds" This is positive, but the standards should specify minimum thresholds that must not be exceeded.</p>	<p>Specifying minimum sea lice thresholds has been debated globally, with some jurisdictions intentionally staying away from this. Requiring treatments can have unintended consequences in terms of fish health and environmental quality. With respect to the monitoring of wild fish, this is not permitted or practical in many jurisdictions. A requirement for the monitoring of sea lice levels on wild fish will not be added.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
Section F. Animal Welfare: Sea Lice	<p>The use of selective breeding to reduce the susceptibility of salmon to sea lice infection is potentially a positive step that avoids other low welfare control methods. However, the use of selective breeding is associated with some risks. There is a risk towards wild fish also when selectively bred fish escape into the environment. These are factors that should be considered when encouraging breeding program</p>		<p>Thank you for your insight on this topic. We will discuss and consider whether to revise this text prior to publication.</p>
4.1	<p>Training must be species and production stage specific. Updated training must be given at least annually.</p>	<p>Farm staff who are responsible for working with fish shall be trained in good fish welfare practices through study of one or more fish welfare training programs and/or <u>by an aquatic animal veterinarian who performs regular site visits, at least annually as well as in cases of fish health or welfare concerns</u>. This training shall include species-specific behaviors, signs of stress and injuries typical in crowding and transport situations as well as appropriate control and corrective measures. Training must also be production method specific with the emergence of novel rearing methods for salmon in both closed and offshore pens.</p>	<p>GSA agrees to the proposed changes and will update the language, except for the component related to an aquatic animal veterinarian, as we feel that is adequately incorporated with the requirements of an accredited fish health professional.</p>
4.1	<p>This clause has been improved on and now includes mention of fish health as well as welfare. Additionally, it requires the professionals' qualifications and experience to be documented and available</p>	<p>The fish health professional should also be required to demonstrate continuing professional development in the form of regular continuing education in fish health, disease management, and emerging treatment methods. The training/development should also be production stage and method specific. Meaning that the professional understands the different systems such as land based and sea-cages and thus the different problems they pose for fish health and welfare.</p>	<p>A previous comment requesting species-specific training requirements, which GSA has agreed to, shall fulfil these proposed comments.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.1 - 4.23	Humane slaughter requirements are too limited.	Humane slaughter requirements should be increased and listed in the standard rather than only in the guidance, as auditors assess against the standard, not the guidance.	While it is correct that ultimate compliance is determined through specific clause requirements, guidance provides a critical tool for auditors to determine how to audit these requirements and what evidence can, or must, be demonstrated for compliance. With this, BAP intends to include within the guidance site-specific criteria that must be met in regards to humane slaughter requirements. This will provide more precise compliance to the intent of the clause as each site will seek to comply against highly applicable criteria, rather than attempting to include less-specific requirements within the clause language that would apply uniformly across facilities.
4.1-4.23	Cleaner fish sourcing requirements are weakly defined and should be built out to control for overfishing, native strains, requirements for hatchery-reared cleaner fish, welfare, feed, and slaughter.	Recommend bringing cleaner fish sourcing requirements in line with ASC and RSPCA standards to align stronger definitions and consistent application.	GSA completed a review of other standards to consider the alignment of the proposed update to the BAP Salmon Farm Standard. While we will consider certain components for adoption, we believe our proposed updates far exceed other standards' requirements on cleanerfish.
4.3	This is positive that farm staff are trained in good fish welfare practices, and it is good that the clause makes it clear who is responsible for the training and some of the areas that training would encompass.  It is good that staff are trained in crowding and transport situations.	<p>The clause should specify how regularly staff should complete training.</p> <p>The training should also cover recognising the most common diseases, injuries and mortalities that are associated with salmon. Taking into account different geographical regions may have different health problems being more prevalent.</p> <p>Training/education of staff to monitor for signs of stress and injury - no vigorous activity should be observed; only occasional fins breaking the surface of the water should be observed. Management of the crowd must be adjusted based on welfare indicators such as behaviour. Any signs such as red water, free scales in the water or signs of skin/snout damage or haemorrhages on individual fish should signal immediate intervention</p>	GSA agrees to specify that training in clause 4.3 shall be completed annually. GSA also agrees to incorporate these specific components of animal welfare training into the associate clause guidance.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.5	It is good that individual based welfare indicators of health are measured on farm. However, BAP should be more specific with their guidance on welfare indicators. It should not be left to the farms to decide what is appropriate or not. There should be objective measures.	The clause should require that these indicators are not only measured but also reviewed and assessed regularly for trends developing. Thresholds for these health indicators should be established by BAP. Action must be taken if morbidity and mortality rates rise above threshold levels. The clause should then outline steps taken to respond to poor welfare indicators. Such as adapting the fish health plan, management changes and veterinary treatments.	GSA agrees to add into the compliance guidance for clause 4.5 that the Fish Health Management Plan that fish welfare indicators must be recorded and utilized within the Plan as a mechanism to prompt action or remediation efforts.
4.5		This clause should specify how regularly these indicators are taken.	We agree with your comments and will discuss an appropriate frequency and consider an amendment to the standard.
4.6	Add a requirement to report any trends towards exceedance of trigger levels	The detection of any trend towards exceedance of the farm's established "trigger level" indicators shall be immediately followed by corrective actions to bring conditions back within acceptable levels, and such incidences shall be reported immediately to the Certification Body and to BAP.	GSA disagrees with this proposed update as it is not a practice of BAP to require facilities to formally report any trending that does not exceed standard requirements to BAP and the CB.
4.7		The clause should be more specific than stating a 'timely manner'. Fish welfare and health concerns should be dealt with immediately by the fish health professional	Given the wide range of complexity, severity, and associated treatments for fish health and welfare concerns, GSA believes it is in the best interest of animal welfare to give each individual event ample time to be thoroughly investigated and remediated, rather than focusing on efficiency.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.7	The term “timely manner” is a vague, undefined period that must be explicitly noted here when detailing animal welfare concerns and corrective action plans.	The aquatic animal veterinarian and/or farm management shall investigate and address all fish health and welfare concerns raised in the daily reports in a timely manner, immediately or within a specified timeframe according to urgency. Staff must check for mortality and moribund animals at least once per 24 hours, remove, and humanely euthanize the animals upon discovery. This information must be recorded.	Given the wide range of complexity, severity, and associated treatments for fish health and welfare concerns, GSA believes it is in the best interest of animal welfare to give each individual event ample time to be thoroughly investigated and remediated, rather than focusing on efficiency.
4.8 and also under section titled -Cleaner fish (Not written under specific clause)	“If cleaner fish are used (see Cleaner Fish below) and cannot be re-used following harvest of the farm fish, they shall also be euthanized humanely.” – this is positive that it states they should be euthanized humanely, however it requires more detail.	We strongly recommend that cleaner fish use should be prohibited because their use is associated with serious welfare concerns, such as high mortality rates, inability to access food/starvation, disease and injury, lack of shelter/correct environment and inter/intra-specific aggression. Furthermore, they are not effective in removing sea lice, and there is little evidence supporting their usage on farms. However, if they are used the standards should outline how exactly cleaner fish should be euthanized and the steps taken to ensure that it is ‘humane’.	GSA completed a review of similar salmon standards and have determined the proposed requirements regarding cleanerfish meet or exceed the requirements of other standards. However, in order to further strengthen these requirements, GSA will provide further detail to mandate that cleanerfish are permitted and encouraged as a “working animal”; are endemic to / ubiquitous in the region in which they are used, and protocols are in place to make sure welfare is upheld in any wild capture efforts and in transport.

4.10	<p>It is positive that a written cleaner fish welfare plan must be complied with. However, the plan still lacks sufficient detail. It is not sufficient to say - "Since their use for this purpose is relatively new specific welfare measures are still under development". There must be welfare measures in place.</p>	<p>We strongly recommend that cleaner fish use should be prohibited.</p> <p>However, if they are used the Cleaner Fish Welfare Plan is not sufficiently representing the needs of cleaner fish and should be improved.</p> <p>Cleaner fish welfare standards must ensure they are provided supplementary feed that meets their needs, their health is monitored and a fish welfare professional and treated by a vet, they have adequate shelter that ensures they can hide. Mortality and morbidity should be reported, and thresholds should be set for this. If levels are too high, then there should be action to reduce this, or the certification scheme should be rescinded from the farm. Furthermore, there should be requirements for the humane slaughter of cleaner fish.</p> <p>Hides/refuges for cleaner fish must be placed away from the net wall, to avoid having to move them each time nets are cleaned. Hides/refuges must be cleaned regularly. Refuges should be left in the pens during the winter at sufficient depth of water to allow cleaner fish, and in particular wrasse, to rest during their period of inactivity. Substrate should be placed in farms to allow all lumpfish to rest also.</p> <p>During feed withdrawal periods and any other handling or maintenance activities of salmon that might cause stress due to interspecies confinement, producers are required to separate all cleaner fish from salmon. This decision should be guided by a fish welfare expert or aquatic animal veterinarian. Furthermore, if cleaner fish are employed in production, they must undergo humane euthanasia. Prior to slaughter, they must be promptly stunned using humane methods. Practices such as carbon dioxide asphyxiation, ice slurry slaughter, and asphyxiation in air are prohibited.</p>	<p>The standard covers cleanerfish welfare in terms of provision of veterinary care, mortality records, etc. under the farm Fish Health Management Plan, which covers "any fish species under culture or use at the farm". The Cleanerfish Welfare Plan is additional to this. Cleanerfish health checks, mortality records, provision of shelter, supplemental feeding, humane euthanasia, etc. are all covered in the standard. However, in follow-up discussions with the Technical Committee it was determined that additional, cleanerfish-specific sub-clauses would help to clarify and strengthen these requirements. With this, we have proposed a number of unique sub-clauses under clause 4.10 to further detail cleanerfish requirements.</p>
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4.10	<p>The addition of "cleaner fish" species - such as the ballan wrasse (<i>Labris bergylta</i>) and lumpfish (<i>Cyclopterus lumpus</i>) - as a means of controlling existing lice populations is a popular alternative to notoriously harmful intervention methods such as thermal delousing. Unfortunately, existing literature evaluating the effectiveness of cleaner fish in controlling lice outbreaks present mixed results, with predominantly negative results when implemented on a commercial scale. Moreover, numerous studies have found that housing cleaner fish in sea pens results in negative welfare outcomes such as unacceptably high mortality rates.</p> <p>BAP should not allow the use of cleaner fish. However, their welfare must be safeguarded if they are still used despite this call to phase them out. It must be stated that the use of cleaner fish as a tool in reducing sea lice infestation comes secondary to the use of preventative measures such as optimal husbandry practices, lower stocking densities, oversight by a certified aquatic animal veterinarian or fish welfare specialist, etc. Furthermore, the use of cleaner fish should only be permitted as long as producers can demonstrate there are no welfare impairments for both cleaner fish and the primary farmed species. All</p>	<p>If cleaner fish are used, the farm shall be able to demonstrate compliance with a written Cleaner Fish Welfare Plan, including at a minimum consideration of the need for shelter, supplemental feed, proper handling, veterinary care and the monitoring of Operational Welfare Indicators (OWIs).</p> <p>Producers must segregate all cleaner fish from salmon during periods of feed withdrawal, in advance of salmonid treatment for which cleaner fish do not have a treatment need, in addition to any other handling or maintenance operations that could result in elevated stress as a result of interspecies confinement. This determination should be made by a fish welfare expert or aquatic animal veterinarian.</p> <p>If cleaner fish are used during production, they must also be euthanized humanely. Before slaughter, they shall be stunned instantly by humane means. Carbon dioxide asphyxiation, ice slurry slaughter and asphyxiation in air, shall not be used.</p>	<p>The standard covers cleanerfish welfare in terms of provision of veterinary care, mortality records, etc. under the farm Fish Health Management Plan, which covers "any fish species under culture or use at the farm". The Cleanerfish Welfare Plan is additional to this. Cleanerfish health checks, mortality records, provision of shelter, supplemental feeding, humane euthanasia, etc. are all covered in the standard. However, in follow-up discussions with the Technical Committee it was determined that additional, cleanerfish-specific sub-clauses would help to clarify and strengthen these requirements. With this, we have proposed a number of unique sub-clauses under clause 4.10 to further detail cleanerfish requirements.</p>
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Audit Clause	Public Comment	Proposed Change	GSA Response
	relevant welfare provisions listed for the primary farmed species must also apply to cleaner fish being used.		
4.11	“Transport of fish shall be planned thoroughly with stocking density and fish number per tank calculated in advance”	<p>There should be an upper limit for the stocking density and number of fish per tank during transport. The upper limit should be no higher than at other times during production and should be kept at 10kg/m3. The optimum stocking density will vary depending on length of transport too.</p> <p>Without a clear upper limit, stocking density is liable to become too high and fish welfare to suffer as a result</p>	<p>Statement on how density can't be the same for transport, there are different technologies, environments, situations, etc.</p> <p>GSA will add to the clause guidance details on how density must be carefully evaluated before transport and then re-evaluated upon arrival for effectiveness. However, technology, environment, and various other factors create a variable and evolving landscape related to density during transport, and at this time GSA does not intend to amend this clause language.</p>
4.11	It is positive that the standard specifically mentions to avoid distress while handling. However more detail is required. Furthermore, the clause should be more specific on guidelines and time out of water.	<p>BAP should first state that handling and crowding be kept to a minimum and only when absolutely necessary since crowding can cause stress and damage.</p> <p>BAP should also require that the frequency, intensity, and duration of the handling procedures are kept to a minimum and establish specific periods of times. “No enclosure must be crowded more than twice in any one week or three times in any month”.</p> <p>The fish should not be crowded for longer than 1 hour and repeated crowding should be avoided.</p> <p>Where unavoidable there should be a period of 24-48 hours between subsequent crowds. Crowding salmon should only be carried out for a maximum of 2 hours with time for fish to recover between successive crowds.</p>	GSA believes the current language in the implementation notes appropriately address all of the comments regarding general best practices for handling and crowding. However, given the varied situations and evolving technology in this space, GSA does not intend to include quantitative crowding parameters at this time.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.12 and Water Quality Management Plan (WQMP)	The farm shall have a written Water Quality Management Plan (WQMP) that includes the monitoring, mitigation measures and training indicated in the numbered requirements below.	<p><u>The water quality management plan should be expanded to include other water quality parameters, including suspended solids, water speed, pH, CO<sub>2</sub>, ammonia, nitrate, salinity, turbidity and temperature, should also be monitored continuously. Furthermore, BAP should establish limits and thresholds for optimum levels of these parameters and ensure that water quality does not deteriorate.</u></p> <p><u>Water quality, such as dissolved oxygen, salinity, turbidity and temperature, should be monitored continuously. Measurements should be taken not only from surface waters but throughout the depth of the cage. This data is crucial to understanding how the fish behave and aggregate within a sea-cage. When changes in the environment occur which lead to suboptimal conditions within a sea cage or if rapid changes are detected, management steps should immediately be taken to address any welfare impacts upon the fish e.g. by oxygenating the water, reducing biomass within the cage or increasing cage volume.</u></p> <p><u>See the end of the document for more guidance on water parameters and also see the following for detailed water quality welfare indicators</u>  <a href="https://nofima.no/wp-content/uploads/2021/05/FISHWELL-Welfare-indicators-for-farmed-Atlantic-salmon-November-2018.pdf">https://nofima.no/wp-content/uploads/2021/05/FISHWELL-Welfare-indicators-for-farmed-Atlantic-salmon-November-2018.pdf (section 4.1)</a></p> <p><u>Also, water quality measurements should be taken not only from surface waters but throughout the depth of the cage. This data is crucial to understanding how the fish behave and aggregate within a sea-cage</u></p>	<p>GSA will discuss with the technical committee which, if any of these additional parameters should be incorporated into the WQMP. It is important to consider which factors have a demonstrable effect on fish health and wellness as well as environmental quality and performance. Additionally, GSA intends to ensure any additional reporting requirements would relate to water quality variables that can be reasonably managed at the farm level. Lastly, GSA agrees to include in the related clause guidance that samples are to be taken at depth.</p> <p>In discussion with the TC the clause will remain the same.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.12	There needs to be a requirement to have at least DO and temperature data reported to the CB and to BAP at the time of audit. (Not sure what the mechanics of such reporting would need to be.)	Append at the end of clause 4.12 the following: Data concerning the average monthly and the minimum and maximum monthly values for dissolved oxygen and temperature shall be included in the audit report.	Following discussions with the Technical Committee, GSA does not believe that requiring average monthly values improves the robustness or integrity of the clause requirement. However, based on discussion we agree to include datapoint clause requests for the annual maximum and minimum for DO and temperature.
4.14	In the guidance section concerning Water Quality under Section 4, a correction is needed for calculation of loading index, used in clause 4.14, i.e., to reduce the harvested weight of the year class by the weight of juvenile fish at the time of stocking, since feeding of the juvenile fish occurred at a different location from the farm, and such loads should have been accounted for under either the hatchery certification, or under the marine cage smolt site certification.	data shall be recorded in audit reports: Net weight of fish produced per year class crop (kg)  (harvested weight minus the weight of juvenile fish at initial stocking)	GSA agrees with the proposed change and will make the update.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.15	<p>It is positive that carbon dioxide and ammonia are monitored in journeys over 12 hours and that if their levels exceed thresholds then the farm must adjust procedures. It is also positive that the clause outlines the types of procedures that can be adjusted to correct the water quality problems in future events</p>	<p>The standards should require the monitoring of these parameters in all journeys and not just those over 12 hours. It then states that if these parameters are found to be above benchmarks, then it will make modifications for future transport. It is not sufficient to only make improvements for subsequent transport, as this still causes the original fish to suffer. There should be methods for monitoring and adjusting water quality during transport.</p> <p>BAP should establish what is meant by 'established benchmarks'. There should be written water quality parameters for the transport of fish.</p> <p>The clause should be more specific regarding the monitoring of water temperature during transport. Currently it is too vague and not mentioned in the clause itself. It is mentioned in another section – "Fish shall be harvested and transported to processing plants or other markets in a manner that maintains temperature control"</p>	<p>Based on discussions amongst the Technical Committee, it was agreed that 12 hours was an appropriate threshold to behind monitoring, as these indicators are extremely unlikely to rise to levels of concern at lengths below this.</p> <p>GSA will prioritize through clause guidance to lay out specific parameters and trigger levels for monitoring during transport.</p>
4.15	<p>It is positive that the WQMP requires training of staff on measuring key parameters and that when fish are being crowded the oxygen must be maintained at 80% saturation</p>		<p>Thank you for your comment.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.15	<p>Todas las embarcaciones que trabajan en la empresa son con alta tecnolog' pia sin embargo no todos miden el amonio (NH4) y esto es porque se considera que el CO2 es mas relevante, ademas hay recirculacion del agua con un desgasificador, y todos los parametros son controlados p'or lo que el punto se podria obviar el amonio o bien poner un o.</p> <p>All the vessels that work in the company are with high technology, however not all of them measure ammonium (NH4) and this is because it is considered that CO2 is more relevant, in addition there is recirculation of the water with a degasser, and all the parameters They are controlled so the point could be omitted or put an o.</p>	<p>The point is met, however, the ammonium is not measured since everything is correlated so that the ammonium is not produced and the CO2 is more relevant, we propose eliminating the ammonium or a clause for Chile, we work with wellboats with the most high technology and they are not afraid of ammonium, it is not relevant.</p>	<p>Based on discussion with the Technical Committee to amend this clause to require temperature and/or ammonia.</p>
4.16 & 4.16.1	<p>Individual aquatic animals must have access to sufficient space to exhibit their natural behaviors (e.g. foraging, nesting, etc.). Aquatic animals should be stocked at a density no higher than the level which is shown to produce the lowest stress, lowest maladaptive behaviors, and lowest conspecific aggression. This is to be determined by the best available evidence.</p>	<p>The number of fish stocked per cage shall be determined by a certified aquatic animal veterinarian based on historical site conditions, production history and historical fish welfare indicators. Number stocked shall result in biodensity per cage that is below 20 25 kilograms per cubic meter.</p> <p>Biodensity shall not be allowed to increase above this limit for no more than 5 percent of the production cycle, and only during or immediately prior to harvest.</p> <p>The farm shall record quantifiable operational welfare indicators (health and physiological indicators, behavioral indicators and water quality indicators), for each site, at any period when biodensity is greater than 15 21 kilograms per cubic meter. Number of fish stocked to the site in subsequent production cycles shall be re-evaluated prior to production.take the results into consideration.</p>	<p>There is a growing trend recognizing that good fish welfare in fish farming is good business practice, and since site characteristics are variable, operational conditions should be based on this, rather than a biodensity threshold. The BAP standard is moving in this direction with this hybrid approach, which will provide data to inform the next iteration of the standard. The clause will remain as is, but we will consider adding to the associated clause guidance information on the re-evaluation of results in advance of next stocking.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.16 and 4.16.1	The standards have not improved the stocking density for salmon and they require improvements	<p>The stocking density of salmon should not exceed 10 kilograms per cubic meter. Stocking density should be 10 kg/m<sup>3</sup> or less to allow for sufficient space for salmon to live with one another with minimal injury and stress.</p> <p>It is not sufficient to base the number of fish stocked per cage on “historical site conditions, production history and historical fish welfare indicators”. This is too subjective and could lead to high bio-densities. This process could be used, but only after an upper limit of 10 kg/ m<sup>3</sup> is established.</p> <p>Feed distribution methods and stocking densities should allow all fish, including cleaner fish, access to feed to avoid aggression and fish should be fed to satiety,</p> <p>Bio density should not be allowed to rise higher than the set limit for any amount of time. The requirement regarding 5% of total time is difficult to enforce and should be removed. If this is not possible, The standards should outline how record keeping will ensure that bio density is not exceeded for more than 5% of the production cycle. Otherwise, this clause is unlikely to be properly enforced.</p>	There is a growing trend recognizing that good fish welfare in fish farming is good business practice, and since site characteristics are variable, operational conditions should be based on this, rather than a biodensity threshold. The BAP standard is moving in this direction with this hybrid approach, which will provide data to inform the next iteration of the standard. The clause will remain as is, but we will consider adding to the associated clause guidance information on the re-evaluation of results in advance of next stocking.
4.19	Add a requirement to suspend any farm that has more than one cycle with survival rate <80%	Append at the end of cause 4.19 the following: Any farm site that has had while in the BAP certification program <80% survival rate for two consecutive cycles shall not be eligible for BAP certification.	GSA agrees to implement the following additional language: “Farm sites that report a survival rate below 80% for two consecutive production cycles shall conduct an investigation to determine root cause and appropriate corrective action.”

Audit Clause	Public Comment	Proposed Change	GSA Response
4.20		<p>The standards should clearly state - Fish should be slaughtered humanely on site and they should not be transported whilst alive. However, if fish are to be transported whilst alive then the following improvements to standards should be made:</p> <p>Furthermore, fish should not be transported without being assessed by a vet. If fish are found to be sick or unable to travel, then they should not be loaded onto transport vehicles.</p> <p>The clause should outline what it means by 'gentle handling'. Fish preferably not be handled while loading onto transport. They should instead use systems of pumps that are appropriate size and properly maintained.</p>	<p>GSA agrees to include the following components into the associated clause guidance, as well as a general definition of 'gentle handling':</p> <ul style="list-style-type: none"> <li>- When possible, fish should be stunned and slaughtered onsite to minimize stress.</li> <li>- When live transport is required, the following should be considered in transport: <ul style="list-style-type: none"> <li>• Planning for transport: Fish should be inspected for fitness to transport and must not be loaded if showing signs of disease, physical damage, or unusual behaviour, or if they have recently been exposed to a significant stressor. Fasting before transport should not exceed 72 hours.</li> <li>• Maintaining water quality appropriate for species</li> <li>• Procedures to minimize biosecurity risks, physical injuries, and mortalities</li> <li>• Cleaning and disinfection of transport tanks or containers</li> <li>• Water temperature appropriate for the species</li> <li>• Contingency plans</li> <li>• Established densities for each species during transport</li> <li>• The overall loading and unloading time should be kept to a minimum and performed according to written Transport Standard Operating Procedures. Crowding should be carried out in steps to minimize significant stress response</li> <li>• Removal of fish from water and handling of live fish should be minimized.</li> <li>• Fish should be made accessible for inspection at all times, unless legally prohibited.</li> </ul> </li> </ul>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.21	<p>The development of Standard operating procedures is welcome. And it is positive that the clause stipulates that when “When requirements of the SOP are not met, the root cause and corrective actions shall be documented”. It is also positive that the SOPs are made in conjunction with the accredited fish health professional</p>	<p>It is important that standard operating procedures are adhered to strictly. There should be an opportunity for SOPs to be assessed and inspected to ensure they are suitable and to ensure animal welfare.</p> <p>The clause should specify who is responsible for ensuring that the requirements of the SOPs are met</p>	<p>GSA proposes the following language to be included into the associated clause guidance:</p> <p>The intent of the clause is to ensure the animals are rendered unconscious quickly and remain unconscious until bleeding slaughter.</p> <p>Responses to the following indicators should be considered to establish effectiveness of stunning in the Slaughter Standard Operating Procedure:</p> <ul style="list-style-type: none"> <li>• Swimming behavior</li> <li>• Righting ability</li> <li>• Handling</li> <li>• Stimulus (i.e. pin prick)</li> <li>• eye roll</li> <li>• observed regular opercular movement</li> </ul> <p>The Slaughter Standard Operating Procedure shall include:</p> <ul style="list-style-type: none"> <li>• Provisions for calibration of all stunning and slaughter equipment</li> <li>• Contingencies for cases where the stunning process is determined to be ineffective or inconsistent</li> </ul>
4.22	<p>We commend BAP for including the prohibition of ice-slurry as a method of stunning/slaughter and recommend that this language be repeated within the context of 4.22.</p>	<p>The SOP for slaughter shall ensure that fish be quickly rendered unconscious by humane means (carbon dioxide asphyxiation, ice slurry slaughter and asphyxiation in air, shall not be used) and slaughtered while unconscious.</p>	<p>GSA is including the following statement in the associated clause guidance”</p> <p>Humane slaughter methods appropriate for the species should be utilized at all times. Facilities should be able to explain the appropriateness of slaughter methods in regards to humane treatment. Inhumane treatment includes carbon dioxide in water, asphyxiation in air, bleeding without effective pre-stunning, and the use of salt or ammonia baths. Time elapsed between stunning and slaughter should be minimized. Handling of live fish should be minimized.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.22	<p>The clause does not establish exactly what techniques are 'humane' for rendering fish unconscious and then slaughtering them before consciousness can be regained.</p> <p>It is positive that the clause states that fish should not be out of water longer than absolutely necessary, however a limit of time is required.</p> <p>It is an improvement that the clause states staff should be trained to evaluate the slaughter process, indicators of unconsciousness, and procedures in case of failure. Furthermore, the new standards specifically mention that the slaughter process should be monitored at multiple points and times.</p>	<p>The clause should specifically detail the allowed techniques, i.e. electrical or percussive methods for stunning, according to established parameters suitable for the species and size of fish etc.</p> <p>See end of document for more detail on humane slaughter methods</p> <p>The clause should state that time out of water should be limited to 15 seconds. Otherwise, the clause is too subjective and open to misinterpretation.</p> <p>The standards should do more than just monitor for failure there should be specific plans in place for if errors occur. Furthermore, the standards should establish acceptable thresholds for failure and consequences for surpassing these thresholds.</p> <p>Back-up stun methods should be specifically required</p>	<p>GSA is including the following statement in the associated clause guidance"</p> <p>Humane slaughter methods appropriate for the species should be utilized at all times. Facilities should be able to explain the appropriateness of slaughter methods in regards to humane treatment. Inhumane treatment includes carbon dioxide in water, asphyxiation in air, bleeding without effective pre-stunning, and the use of salt or ammonia baths. Time elapsed between stunning and slaughter should be minimized. Handling of live fish should be minimized.</p>
4.23	<p>It is positive that mortality rates during transport are to be monitored and recorded and that if they exceed 5% then the farm should demonstrate steps that are being taken to reduce it.</p>	<p>This clause should state who is responsible for monitoring fish mortality during transport. A specific person should be responsible for the monitoring and recording of data during transport.</p> <p>Transport mortality limit being set at 5% is too high BAP should require this is set at 1-2%. BAP should also ensure that mortality rates during transport are appropriate for production stage of the fish.</p>	<p>Since the position title of people monitoring mortality varies across companies and even within companies, it is not appropriate to require a specific position title to monitor and record mortalities. The clause will ensure the monitoring and recording is done, with evidence available at audit. Since this clause is specific to harvest activities, consideration of production stage is not appropriate here. The clause will be kept as it is.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.25	Throughout this section, an aquatic animal veterinarian should be required rather than “fish health professional”.	The farm shall designate an accredited aquatic animal fish health professional veterinarian to oversee the FHMP, direct the diagnosis and treatment of fish diseases and coordinate activities with neighboring farms under an Area Management Agreement (AMA), where such an agreement is in place. The accredited fish health professional shall be available in person or by phone at audit to answer questions. The applicant shall notify the certification body if the accredited fish health professional changes.	GSA believes that by specifying that the fish health professional be “accredited” is sufficient to ensure their competency and creditability in relation to overseeing FHMPs. In practical terms this would mostly be done by a veterinarian but this level of expertise is not necessarily needed for all of the activities listed here. Government regulations require that diagnosis, prescription writing, etc. be performed by a veterinarian.
4.28	It is good that the Fish Health Management Plan mandates a fallow period of at least eight weeks after completion of harvesting. Especially when this is in coordination with neighbouring farms. This can be very productive in reducing the recurrence of sealice infestations		Thank you for your comment.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.28	<p>Claus 4.28 does not include variation in some national aquaculture legislations.</p> <p>Recent changes in the Faroese aquaculture legislation (Kunngerð nr. 123 fra 27. Nov. 2023) authorizes the Chief Veterinary Officer, to allow farmers a shorter fallow period if these specific requirements are fulfilled:</p> <ol style="list-style-type: none"> <li>1. The total production period, from deployment of the first fish to the last fish has been slaughtered, shall not be any longer than 365 days.</li> <li>2. The Farmer shall prove exceptionally good fish health and fish welfare during the whole production period, including the Environmental and Technical conditions.</li> <li>3. The mortality shall not have been increased due to disease or due to unknown mortality.</li> </ol>		<p>Based on discussion with the Technical Committee, it was agreed that the overall intent of the fallowing requirement is to reduce the risk of disease and environmental harm, and that the time needed to generate these safeguards varies regionally. With this, we have proposed reducing fallowing to a minimum of 4 weeks, with a new requirement that any cage fallowing for 4-8 weeks must demonstrate regulatory approval and in situ data demonstrating no detrimental impacts compared to an 8 week baseline.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
4.3	It is important to understand and assess the different types of mortality, so that change can occur, and mortality can be prevented. Therefore, more detail is required for the different types of mortality described in this clause	<p>The clause should define what is meant by 'normal mortality', 'disease-related mortality' and 'unexplained mortality'. Furthermore, it should outline who is responsible for assessing the mortality and deciding what fits into each category. This should be done by the fish health professional.</p> <p>Furthermore, BAP should establish what proportion of mortalities can be labelled 'unexplained'. Otherwise, many instances of mortality may not be correctly investigated.</p> <p>BAP should establish maximum mortality rates for farming. Including different maximum rates for different production stages of salmon. Currently only transport has a maximum mortality rate. There should be strict limits on mortality and BAP should detail the consequences of not meeting these limits. If a farm does not reduce its mortality rate following an instance where it has been reported too high, then clear consequences must follow. This should be disqualification from the certifications scheme.</p>	<p>By establishing minimum survival rates within the requirements of clause 4.19, mortality rates are being intrinsically considered.</p> <p>GSA agrees that 'normal mortality', 'disease-related mortality' and 'unexplained mortality' should be defined based on their usage in the clause language. This will be included in the associated clause guidance.</p>
4.31	This requires more specific detail regarding what the extra precautions are	The FHMP should specify what check will occur on fish and what is meant by increased vigilance. This alert status should not result in compromises to welfare of farmed fish.	GSA agrees with this comment and intends to include within the clause guidance details on what is included within the FHMP. In regards to increased vigilance, it is the responsibility to demonstrate what this means in relation to their specific facility which the auditor will assess.
4.38		The standards should explain the methods for verifying the effectiveness of defined withdrawal periods and state the methods of testing. It should state how this will be achieved and most importantly not cause negative welfare for the fish that are tested.	The associated clause guidance will provide verified references on established withdrawal periods and its impact on harvest timing. Methods of testing shall also be defined within this guidance.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.39	It is positive that the standards require antibiotic resistance testing prior and during treatment.	The standards should state that following sensitivity testing the most appropriate antibiotic should be chosen as a treatment. Antibiotic resistance in vitro and vivo may not exactly correspond, and an antibiotic may not be effective based only on the results of culture and sensitivity testing. Antibiotic effectiveness and responsible stewardship should be based on the entire clinical situation and be judged on a case by case basis.	An intent of the Salmon Farm Standards antibiotic requirements is to minimize the number of instances that antibiotics are applied to animals. By extension of this intent, GSA seeks to ensure that each antibiotic treatment has the highest likelihood of efficacy while ensuring animal welfare. Based on this approach, GSA disagrees with the proposed change and will maintain current language.
4.40		<p>Compassion recommends that sea lice treatments that cause major welfare problems must not be used routinely and only when prescribed by a vet. The thermolicer should not be used at all as it can cause injuries, severe stress and high mortality. Chemotherapeutics and hydrogen peroxide should not be used as they are associated with high mortality rates, injury and stress.</p> <p>If these methods are to be used then BAP should establish limits on the number of times and how often fish have treatments with it</p> <p>Furthermore, the health status of the fish to be treated must be assessed and approved prior to treatment by a fish health professional.</p> <p>In addition to compliance with national or regional rules, BAP should encourage farms to reduce the reliance on chemical treatments for parasite control. Farms should strive to implement innovative, sustainable, and high-welfare methods for parasite management and include fallow periods in their farms.</p>	The approach towards sea lice management in this standard is to strike the most responsible and appropriate balance between environmental management and animal welfare management. Treating sea lice on farms often results in offsetting outcomes in regard to these two factors, and must be considered carefully. Based on in-depth consultation with the Technical Committee in developing this document, GSA believes the standard current achieves an appropriate balance and will remain as is.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.40.2		The environmental impact of chemical methods should be monitored. Farms shall take steps to ensure treatments given to farmed fish do not spread into the environment and cause problems for wild salmon.	GSA agrees with this comment and intends to include within the associated clause guidance that such precautions are considered within the IPMP.
4.40.2	It is not clear how “should be limited in favor of” is auditable	More detailed requirements for demonstration that parasiticides are deprioritized over non-chemical methods	GSA agrees with this comment and will include sufficient detail in the associated clause guidance.
4.40.3	It is essential that equipment is properly maintained and inspected regularly.	The clause should outline exactly how often checks should be performed on the equipment and who is qualified to perform them.	As written, the clause requires all equipment involved in the physical removal of sea lice to be inspected prior to usage, which determines the frequency of inspection. GSA will amend the clause to state “prior to each application” to increase clarity.
4.40.4	It is good that the clause requires fish welfare to be assessed during physical sea lice removal and that the operation should not result in a net loss of welfare. However, the standards should also require fish health to be considered	<p>The health status of the fish to be treated must also be assessed and approved prior to treatment. This should be performed by the fish health professional. If the health status is not acceptable before commencing, then sea lice control operations should be postponed.</p> <p>Furthermore, fish health and welfare should be monitored and recorded following treatments and sealice control methods. There should be limits/thresholds on morbidity and mortality for sealice control methods.</p>	GSA agrees that health status prior to removal shall be part of the process and will include that requirement within the clause language. Within the clause guidance, GSA intends to include sufficient detail on escalation processes when welfare reductions are observed.

Audit Clause	Public Comment	Proposed Change	GSA Response
4.43		The standards should outline methods for reporting the use of critically important antimicrobials to the relevant authorities.	The use of critically important antimicrobials on a farm would result in a critical non-conformity, leading to the auditor immediately informing GSA and the associated Certification Body of this finding. This serves as a sufficient reporting mechanism based on past experience.
4.47	This is positive that staff are to be trained in implantation of biosecurity and health management procedures, according to the FHMP. But there is more detail required	The clause should specify who is responsible for training staff. This should be done by the accredited fish health professional	GSA agrees with this comment and intends to include detail in the associated clause guidance on what is considered a compliant training program.
5.8	Associated with the information requested from the last calendar year for the indicated clauses:  In certification audits We do not have a current harvest		The intent of the clause is to report all harvested product within the calendar year to demonstrate a facility's control over its traceability system, not necessarily to demonstrate complete traceability of the current crop cycle. The standard will include in associated guidance to this point.
5.8	Specify that data shall be provided to the CB and to BAP.	Farms shall provide the volume/mass balance data concerning the above exchanges of BAP-certified products during the external CB audit, and the data shall be included in the audit report.	In discussion with BAP and the Technical Committee, we disagree with the proposed change as it does not improve the integrity of the traceability claims of a BAP certification. BAP auditors are carefully trained in mass balance exercises to validate an effective traceability system. Additionally, the specific volumes moving through BAP-certified farms is managed through a separate mechanism, known as the BAP star system. Including these volumes on an audit report does not improve the auditing process, nor does it provide novel data that was not previously accessible to BAP.

Audit Clause	Public Comment	Proposed Change	GSA Response
5.8	<p>se requiere mayor explicación respecto al flujo, sera desde ovas?</p> <p>More explanation is required regarding the flow, is it from eggs?</p>	<p>We propose that you indicate register and provide the auditor with evidence of the smolt supplier. since it is not understood what it refers to, it is from ova since now with the new BAP standard ova can be certified, so it is not Understand if the eggs also have to be certified, so that the point is clearer. What happens if there is a mix of cages with a BAP supplier and cages not from a BAP supplier, can it be certified for cages? is not understood</p>	<p>If a facility can demonstrate traceability controls down to the individual cage level, then it is certainly possible to demonstrate product of differentiating star-status on the farm. GSA will include in the associated clause guidance details of this information and to reach out to BAP if there are questions on multiple star status claims in one audit.</p>
5.9	<p>Associated with the information requested from the last calendar year for the indicated clauses:</p> <p>In certification audits We do not have a current harvest</p>		<p>The intent of the clause is to report all harvested product within the calendar year to demonstrate a facility's control over its traceability system, not necessarily to demonstrate complete traceability of the current crop cycle. The standard will include in associated guidance to this point.</p>
5.10	<p>Este punto creemos deberia eliminarse, ya que los centros no reciben reclamos por los cumplimientos de BAP, estos reclamos llegan a la planta.</p> <p>We believe this point should be eliminated, since the centers do not receive complaints for BAP compliance, these complaints reach the plant.</p>	<p>It seems to me that this point should be eliminated. The center does not receive complaints, at least in salmon, since they are going to process and this is where the complaints are chosen and those who manage them, the center only responds and provides evidence.</p>	<p>The farm needs to demonstrate a mechanism to maintain records of customer complaints. If these are maintained at a primary processing facility associated with the farm, that is completely acceptable as long as the auditor is able to view and validate these records.</p>

Audit Clause	Public Comment	Proposed Change	GSA Response
5.11	<p>Este punto creemos deberia eliminarse, ya que los centros no reciben reclamos por los cumplimientos de BAP, estos reclamos llegan a la planta y son estas quienes llevan el registro de los reclamos.</p> <p>This point we believe should be eliminated, since the centers do not receive complaints for BAP compliance, these complaints reach the plant and they are the ones who keep the record of the claims.</p>	<p>It seems to me that this point should be eliminated. The center does not receive complaints, at least in salmon, since they are going to process and this is where the complaints are chosen and those who manage them, the center only responds and provides evidence.</p>	<p>The farm needs to demonstrate a mechanism to maintain records of customer complaints. If these are maintained at a primary processing facility associated with the farm, that is completely acceptable as long as the auditor is able to view and validate these records.</p>